



Frontier's Convair 580 jet-prop aircraft is one of three types of planes used in Montana service. The 580 cruises at 350 miles per hour with capacity for 50 passengers. There are 32 of these aircraft in use over Frontier's 16-state system. (Photo courtesy of Frontier Airlines.)

Page 7



DIVISION

OF

AERONAUTICS

Vol. 25 — No. 8

August, 1974



Worthie M. Rauscher, new Administrator of Idaho Division of Aeronautics and Public Transportation.

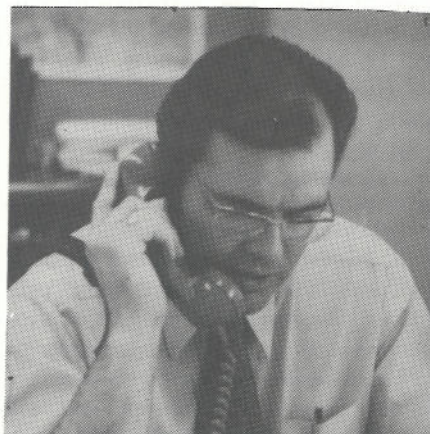
WORTHIE RAUSCHER LEAVES MONTANA

Worthie M. Rauscher, Deputy Administrator of the Montana Division of Aeronautics is leaving Montana effective September 30, 1974, to take over as Administrator of the new Idaho Division of Aeronautics and Public Transportation. Under Executive Reorganization, Darrell Manning, formerly Director of Aeronautics, has advanced to Director of the new Idaho Department of Transportation.

Worthie began his service Sept. 1, 1964 with Montana Aeronautics as

Airport Engineer in the Airports Division of the former Montana Aeronautics Commission under Charles A. Lynch. Subsequently he was advanced to the positions of Chief of Airports Division, Assistant Director of Airports, Deputy Director of the Montana Aeronautics Commission, and under Executive Reorganization, became Deputy Administrator of the Division of Aeronautics in September of 1972.

David C. Kneedler will take over Worthie's work in airport development. Dave has been with the agency since 1966.



David C. Kneedler, new Chief, Airport Development Bureau.

MPA FALL FLY-IN

By STEVE GRAHAM

Glider rides, free-balloon rides and a mountain flying clinic are planned events of the Montana Pilots Association Fall Fly-In in Helena September 13-15.

The schedule also includes Missouri River boat rides and plenty of food and entertainment.

John Serquina, president of the sponsoring Vigilante (Helena) Hangar, says it is an event "to stop the complaints that there isn't enough flying activity in Montana."

The mountain flying clinic scheduled for Friday evening will be presented by Jake Demmerly, Accident Prevention Councillor at the Helena GADO; and Jack Wilson, Safety and Compliance Officer at the Division of Aeronautics. Demmerly and Wilson will also be available Saturday for orientation trips to local mountain airports.

Free-ballooning is scheduled for Saturday morning, followed by glider rides as the wind and thermals begin to rise. Two Missouri Riverboats have been reserved for Saturday afternoon. The boats will cruise the Gates of the Mountain Wilderness, (Continued on Page 4)

**DEPARTMENT OF
INTERGOVERNMENTAL
RELATIONS**

**Thomas L. Judge, Governor
Martin T. Mangan, Acting Director
Official Monthly Publication**

**of the
DIVISION OF AERONAUTICS**

**City/County Airport
Phone 449-2506
Box 1698**

Helena, Montana 59601

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**Worthie M. Rauscher,
Deputy Administrator**

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**CLOSING OF FLIGHT
SERVICE STATIONS**

Montana Senators Mansfield and Metcalf are among 51 Senators who have signed the following letter urging the prevention of Flight Service Station closings during fiscal 1975. Senator Metcalf has advised that this has already passed the House of Representatives.

Senator Robert C. Byrd
Chairman, Subcommittee on
Transportation

1218 Dirksen Office Building
Washington, D. C. 20510

Dear Bob:

Once again the FAA is attempting to close thirty flight service stations in thirty states without providing adequate replacements. The inadvisability of this planned move was

Continued

*Administrator's
Column*



We are quite concerned about the closure of the Air Traffic Control Center in Great Falls and have joined with the Great Falls Airport Authority and committee in asking for a hearing to determine if the FAA can really guarantee greater safety by moving the Center to Salt Lake City. We have maintained that service was not improved by the closure of the Flight Service Station in Dillon as the FAA promised and we think we might have the same results if the Air Traffic Control Center in Great Falls is closed. Governor Tom Judge and our congressional delegation have promised their support for a hearing before anything further is done.

* * * * *

Montana's loss is Idaho's gain. Worthie is going to Idaho as Administrator of Aeronautics and Public Transportation. The move by Worthie is a credit to the Montana Division of Aeronautics as well as a gain for the State of Idaho. We wish him luck in his new position and know that we will be able to continue to keep up the good relations existing between Idaho and Montana, a friendship of long standing.

recognized in an amendment to the Transportation Appropriations bill, H. R. 15404, which passed the House on June 19th. This amendment prohibited the closings of flight service stations during FY 75 by a vote of 281 to 120. We concur with the sentiment of this amendment and ask that you disapprove the FAA request.

As you know, in 1967, the FAA
Continued

established an evolutionary Flight Service Station (FSS) Modernization Plan which envisioned the hiring of over 10,000 air traffic control specialists to man the FSS by 1980.

However, during 1971-72, OMB advised DOT/FAA that such plans were too labor intensive, and a policy was adopted to place only 2,000 personnel by 1980 in a system which should employ 10,000 and instead to automate the FSS system under a longer range plan.

There are at present over 4,000 air traffic control specialists serving in the Flight Service Stations. The decision to automate has repercussions not only on the labor force, but well beyond. Most importantly, in the interests of safety, the new plan of decommissioning of existing FSS at the proposed rate of thirty per year must not be implemented.

The FSS Evaluation Report relating to adopting the new plan states that under the proposed system "90% of the pilots can obtain a weather briefing and file flight plans without direct contact with a flight specialist." No indication is given, however, of how the other 10% are supposed to avail themselves of the information necessary for a safe flight. In addition, it is highly debatable that the 90% will enjoy the same quality of service as is presently available. Indeed, the equipment which is currently developed for replacing manned service stations is not capable of reporting the weather factors of ceiling visibility and precipitation; recording of these vital statistics is beyond current technological capabilities according to FAA and the National Weather Service.

Most distressing is the fact that the automated system is scheduled to begin in 1979, but the implementation proposal for decommissioning existing FSS's would begin immediately, thus leaving unmanned stations around the nation at the accumulative rate of 30 per year.

It is reported by FAA that over 52 million flight services were rendered by the 4,000 air traffic control specialists in FY 1972, and it is estimated that the majority of the 5,000
(Continued on Page 7)

REVISED PART 141 GOES INTO EFFECT NOVEMBER 1

The latest edition of the FAA Aviation News contained the following interesting information:

FAA has adopted new certification and operating standards for the nation's 2,500 approved pilot training schools, increasing their responsibility for pilot training and testing, and assisting pilot applicants to achieve certificates with a minimal expenditure of time. The revised rules covering pilot schools (Part 141 of the Federal Aviation Regulations) will align pilot instruction with sweeping changes to the pilot certification rules (Part 61 of the FAR's) adopted last year.

Revised Part 141, which goes into effect on November 1, 1974, will permit certificated schools having examining authority to recommend their graduates for most pilot certificates and ratings without requiring FAA flight or written tests. The capability of newly certificated pilots to operate safely in today's complex aviation environment will be assured by the higher standards of instruction which will be required. In practice, this means that graduates of approved schools (certificated under new Part 141) will be able to meet the flight time requirements of Part 61 with less than the prescribed minimum hours, assuming that they meet all other requirements for the desired ticket.

The 2,500 currently certificated pilot schools may continue training pilots enrolled under their old approved school certificate until the latter expires. A pilot school certificate issued before November 1, 1974, may be renewed prior to its expiration date for a period long enough to graduate students who were enrolled in specific courses before November 1, 1974. However, this type of certificate renewal will not be extended beyond November 1, 1976.

There are few, if any, jobs in which ability alone is sufficient. Needed also are loyalty, sincerity, enthusiasm, and cooperation.

ACCIDENT PREVENTION PROGRAM THUNDERSTORM—T R W !

By LARRY BASHAM

Pilots Beware! Within the scenic intermountain area of Montana may lie a summer hazard in wait for the unwary—The Thunderstorm.

The thunderstorm, nature's uncontrolled "heat engine"—often encompasses some of the worst weather hazards known to flight. To refresh and update the pilot's knowledge of thunderstorms and associated weather hazards, we offer the following:

The basic requirements for formation of a thunderstorm are:

- (1) Unstable air
- (2) An initial updraft
- (3) High moisture content of the air.

Why, you may ask, with these same conditions present, do we have fair weather cumulus clouds one day and thunderstorms rampant the next? There is no simple answer, however, it is known that latent heat released by condensation of existing water vapor may increase the buoyance of a rising air column until that rising air column becomes self-sustaining. The updraft then becomes the "burner chamber", drawing fuel from below until its fuel source is exhausted or an intermediate layer of dry stable air is encountered. The by-products of this uncontrolled "heat engine" are clouds and precipitation and sometimes vertical currents strong enough to literally disintegrate the ordinary light aircraft.

The general aviation pilot must contend with thunderstorms of varying intensities in virtually all parts of the country and should be aware that all thunderstorm cells progress through three distinct stages which are more commonly called the life-cycle. These stages are:

- (1) **Cumulus**
- (2) **Mature**
- (3) **Dissipating.**

The severity of any thunderstorm is governed by the make-up of the mature stage. While most cumulus clouds do not become thunderstorms, the initial stage is always the **cumulus** clouds. The main feature of the cu-

mulus cloud which will develop into a thunderstorm, is the predominant updraft. This updraft may extend from the earth's surface to several thousand feet above the visible cloud tops. During the cumulus stage, tiny cloud droplets grow into rain drops as the cloud builds upward.

When these droplets become so large that they can no longer be supported by the existing updraft, they begin to fall. This marks the beginning of the **mature** stage and usually occurs some ten to fifteen minutes after the cumulus cloud has built upward beyond the freezing level. Thunderstorm cells which progress rapidly through the mature stage are said to be "limited state" thunderstorms.

In the "limited state" thunderstorm, the mature stage is self-destructive until the updraft will no longer support the rain drops, and precipitation begins to fall through the updraft. The buoyancy of the air is decreased until the updraft becomes a downdraft. The cool precipitation tends to cool the lower portion of the cloud and thus its fuel supply is cut off, the cell loses its energy and the storm dissipates. When all water droplets have fallen from the cloud the **dissipating** stage is complete.

If, in the **mature** stage, the updraft and downdraft areas remain equally balanced, the mature stage may then become a "steady state" thunderstorm cell in which extreme turbulence and large hail may predominate. The "limited state" thunderstorm cell may last from twenty minutes to one and one-half hours while the "steady state" thunderstorm may last as long as twenty-four hours and travel for one-thousand miles.

Many pilots have flown through "limited state" thunderstorms with little or no damage to the aircraft or passengers. They can only consider themselves extremely fortunate for **any** thunderstorm is, again, an **uncontrolled "heat engine"** and may produce any or all of the most violent weather hazards, such as hail, ice and turbulence, a pilot will ever
(Continued on Page 4)



Extinguishing a fire, Yellowstone Airport Fire School.

YELLOWSTONE AIRPORT FIRE SCHOOL

By: GERALD C. BURROWS

A one-day Aircraft Firefighting and Rescue Procedures Training School was held in July at the State-owned Yellowstone Airport.

Explanations were given on films covering extinguishing foams, the different types, their compatibilities and their applications to burning aircraft. Emergency exits and their function, fuel, oxygen, hydraulic locations, etc., for transport aircraft serving the Yellowstone Airport were also covered. Interest was shown on the plans for the new crash fire rescue building for the airport, to be constructed during the summers of 1974 and 1975.

The airport's crash fire rescue vehicle and rescue equipment was demonstrated as well as West Yellowstone's newly acquired pumper.

Several fires using JP-4 jet fuel were extinguished by the firefighters using protein and aqueous film-forming foam. Participants were fully clothed with aluminized asbestos proximity suits.

Represented at this school were three members of the West Yellowstone Fire Department, eleven smoke jumpers from the Interagency Fire Control Center located on the airport, the Fire Protection Inspector and Fire Control Supervisor from Yellowstone National Park, five members of the airport staff and several other interested airport tenants.

(Continued from Page 1)

an area essentially unchanged since the days of Lewis and Clark.

Saturday will be capped by a chuckwagon buffet dinner and entertainment.

The Helena Travelodge has agreed to offer special rates and transportation to all pilots and their families participating in the fly-in. Transportation will be provided for the other events.

Registration fee is \$2.50 per adult. All events will be charged for separately.

Further information is available from John Patten, 650 Stadler Road, Helena, Montana 59601 (458-9156). Please call or write him immediately if you plan to attend. All pilots are invited!

Advance notification is requested from those planning to attend the mountain flying clinic.

For hotel reservations only at the Travelodge call 1-800-255-3050 and specify MPA Fall Fly-In for special rates.

encounter. (Continued from Page 3)

The information we have presented here should be considered minimum basic knowledge on the subject of thunderstorms and is presented in an effort to alert the pilot to the potential hazard of flight in or near thunderstorm activity. We suggest further that the pilot obtain a thorough weather briefing for the area involved and seriously consider the following in making a Go/No/Go decision:

(1) Pilots, particularly those flying light aircraft, should avoid all thunderstorms.

(2) Pilots should never venture closer than five miles to any visible storm cloud with overhanging areas because of the possibility of encountering hail.

(3) Pilots should be extremely cautious in attempting flight beneath all thunderstorms, even when visibility is good, because of the destructive potential of sheer turbulence in these areas.

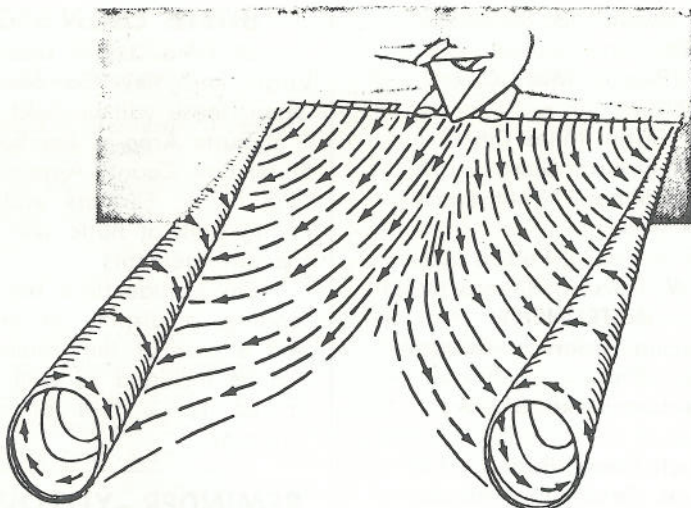
(4) Pilots flying in the vicinity of thunderstorms should, at first sign of turbulence, reduce airspeed immediately to the manufacturer's recommended airspeed for turbulent air penetration for a specific gross weight.

(5) Maintain a straight and level altitude on a heading that will take you through the storm area in the minimum time.

(6) Do not let compulsion take the place of good judgement—the first decision need not be your last if it's a one-hundred-eighty degree turn—**Safety is Always Professionalism.**



West Yellowstone pumper truck.



VFR PILOT EXAM-O-GRAM NO. 53 DANGERS OF WINGTIP VORTICES

Investigations of several fatal and near-fatal accidents show the probable cause to be loss of control when encountering wingtip vortices created by large aircraft. Reports indicate that many pilots are unaware of the dangers associated with wake or vortex turbulence; therefore, applicants for pilot certificates are being tested on their knowledge of this subject.

WHAT ARE WINGTIP VORTICES?

Wingtip vortices are compact, fast-spinning, violently turbulent air masses that trail behind an airplane, sometimes for miles. Unfortunately they are invisible, but if you could see them they would look like two tornadoes stretching back horizontally from each wingtip. Many pilots refer to this phenomenon as "prop wash" or "jet wash," but engineering studies have revealed that the main source of this disturbance is from the wingtips, not the props or engines. These vortex systems are generated by the flow of air from the high pressure region under the wing, and curl around the wingtip to the region of lower pressure on the upper surface forming the two rotating vortices.

WHY ARE THEY DANGEROUS?

They are dangerous because loss of control of aircraft can occur when flying into the wingtip vortices of large aircraft. The velocity of the air circulating about the core of these

vortex systems can be extremely high, particularly those generated by the larger airplanes, and these velocities can exceed the control power of most airplanes. A smaller airplane flying into one of these rotating air masses can experience dangerous upsets and excessive load factors causing structural damage to the airplane. Particular care should be taken to avoid the vortices during landing and taking off.

WHEN ARE THEY STRONGEST?

There are many factors affecting the intensity of wingtip vortices, but it is a safe and practical generalization that the bigger the airplane the more violent and long-lived will be the vortex disturbance. Recent studies indicated that the strongest vortex systems trailing behind the very large airplanes will descend 400-500 feet per minute to approximately 1,000 feet below the airplane. The vortices retain their lateral separation and drift with the wind. The aircraft creating the vortices may be out of sight, and the turbulence generated might be still lingering in the area. The heavier and cleaner the airplane and the slower it is flying, the stronger the air circulation in the vortex cores.

WHAT ACTION CAN THE PILOT TAKE TO AVOID OR REDUCE THIS HAZARD?

a. Avoid passing behind any large aircraft. Alter course to avoid the area behind and below the generating aircraft.

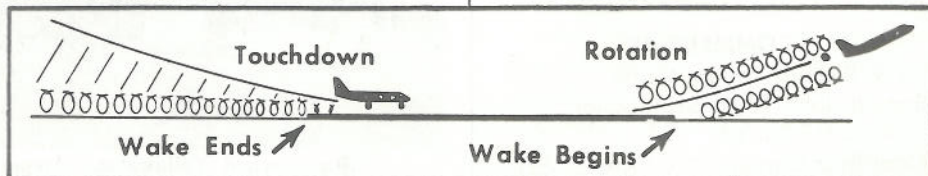
b. Avoid, when possible, places and altitudes frequented by large aircraft. If possible, monitor approach control and control tower frequencies at airports where large aircraft operate. These radio transmissions may give you a clue to the locations and paths of large aircraft.

c. When it is necessary to operate behind a large aircraft, remain **above** the flight path of that aircraft. Vortices settle downward toward the surface and are also affected by the wind and move with the air mass.

d. When taking off or landing behind large aircraft, be on the alert for turbulence and allow adequate spacing. Visualize the location of the vortex trail and avoid those areas.

e. The best way of avoiding wingtip vortices is to know where they are most likely to be encountered and act accordingly. Since vortices are not produced until lift is produced, they will not be generated by an aircraft taking off until the aircraft rotates for lift-off. Vortices cease to be generated by a landing aircraft when its wings cease to produce lift—when it has actually landed. Plan your takeoff and landing accordingly.

RECOMMENDED READING FOR ALL PILOTS. Your attention is invited to the Wake Turbulence Section of the Airman's Information Manual, which thoroughly explains this subject. It is also described in FAA Advisory Circular AC 90-23D (which may be obtained free of charge from: Distribution Unit, TAD-484.3, Department of Transportation, Washington, D.C. 20590).



CONGRATULATIONS



FAA CERTIFICATES ISSUED RECENTLY TO PILOTS

STUDENT

Skip Wilds Wardell, Great Falls
Charles Vincent Ternes,
Warm Springs

PRIVATE

Richard Ervin Grosswiler, Kalispell
James Barnet Porter, Kalispell
Colleen Jo Cox, Great Falls
Howard Leo Prescott, Yorba Linda,
California
Joseph Roy Armstrong-Nelson,
Bozeman
Randy P. Pliva, Drumheller, Alberta,
Canada
William Waldo MacDonald, Westaski-
win, Alberta, Canada
James William Moody, Missoula
Jeffrey Warner Swallen,
New Canaan, Connecticut
Mark William Duffy, Bozeman
Philip Lee Berger, Kalispell
Russel S. Sullivan, Kalispell
Robert L. Brunson, Missoula
James Ronald Parnell, Lakeside
Gregory Paul Sammons, Cut Bank
Wayne Harold Norman, Dodson
Keith E. Brownfield, Missoula
Terry Francis Alme, Sunburst
Robert E. Hector, Billings
Wilbur J. Bennington, Billings
Charles E. Croft, Grass Range
Frederick B. Gould, Miles City
Paul E. Hartman, Miles City
Lee J. Richardson, Miles City
Charles W. Holcomb, Lewistown
Thomas G. Meyers, Billings
Robert E. Hull, Billings
Eddie P. Underwood, Ashland
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Joseph E. Ugrin, Miles City
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William Louis Stewart, Dillon
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Mark Albert Larson, Missoula
(CASMEL)
Mark Andrew Hotchkiss, Butte
(IHR, CRH, PG)
Melvin Ray Willey, Great Falls
(FII, ASMEL)

POWERPLANT MECHANIC

Kurt Dixen Borge, Great Falls (AM)

FLIGHT INSTRUCTOR

Benny M. Hardman, Norwood, Colo.
Douglas J. Hanson, Polson
Conrad Kohrs Warren II, Deer Lodge

SENIOR PARACHUTE RIGGER

Steven Verne Anders, Stevensville
(RIG, CP)

TYPE RATING—B-26

Gene C. Miller, Billings
John D. Lynch, Billings

BUTTE OPEN HOUSE

Word has been received from Virgil and Kay Compton that an Open House will be held September 1 at Butte Area at the Bert Mooney Silver Bow County Airport. The Montana Flying Farmers and Meridian Flying Club of Butte will assist with the arrangements.

Plans include flour bombing, spot landing, a display of new planes, and a tour of the mining museum can be included as well as the last chance for a tour of the electric streetcar.

REMINDER—YELLOWSTONE FLY-IN

Sunday, September 1 is the day of the Yellowstone Airport Fly-In. Pancake and ham breakfast will be served for \$1.60 per person. There will be a static display of interesting aircraft and the U. S. Forest Service will provide guided tours through the Interagency Smoke Jumper Center which is located on the airport.

The Yellowstone Airport is located two miles north of West Yellowstone, Montana. The airport has a paved 8,400 foot runway and a low frequency homer which operates on a frequency of 338 Mhz. Yellowstone Airport traffic and airport advisory can be obtained from Yellowstone Unicom on 122.8 Mhz.

For further information call (406) 646-7631. Why not plan to spend a day or two and see the park. Rental cars are available at the terminal building, as well as direct telephone connections to motels in town.



State-owned Yellowstone Airport, West Yellowstone, Montana

FRONTIER FLIES HIGH IN THE BIG SKY COUNTRY OF MONTANA

By: Edward H. Gerhardt, Director,
Public Affairs Frontier Airlines

Twelve of Montana's communities receive either all or a major portion of their daily scheduled air service from flights flown by Frontier Airlines.

First of Frontier's operation began 27 years ago when Challenger Air Lines, a predecessor of Frontier Airlines, first pulled up on the ramp of Billings' Logan Airport in May 1947. Using a 24-passenger Douglas DC-3 aircraft, the carrier then air-linked Billings with Denver and Salt Lake City via ten intermediate Wyoming communities. Three years later the three small companies of Challenger, Monarch and Arizona merged their efforts into a new expanded organization to become known as Frontier Airlines with operations into a seven state area of the Rocky Mountain West.

Following the discovery of the Williston Basin oil field Frontier was authorized by the Civil Aeronautics Board to expand its operations in September 1954 to Miles City, Glendive, Sidney and Wolf Point. Five years later additional routes were added to Lewistown, Glasgow, Havre and Great Falls. By the mid-1960's the DC-3 workhorse was replaced by 50-1 passenger jet prop Convair 580 aircraft with over twice the cruising speed and capacity of the DC-3.

Next city to be served by Frontier's expanding Montana operations was West Yellowstone in June 1967 to better serve nearby Yellowstone National Park. Later in the fall of that year, both Bozeman and Missoula were added to Frontier's system along with a new route between these cities and Salt Lake City-Denver.

Pure jets began replacing the Convair 580 in Montana when Frontier inaugurated jet aircraft at Great Falls and Billings in the summer of 1969. These pure jet operations provided Montana with new thru-plane service to Dallas/Fort Worth via intermediate service to Casper and Denver. Later

in the spring of 1973 the 97-passenger Boeing 737 jet aircraft replaced the Convair 580 on flights between Bozeman-Missoula and Denver-Salt Lake City.

An economic turndown in the nation's economy in the late 1960's was immediately reflected in drastically reduced passenger travel across Frontier's system. To stem further losses all facets of cost reduction was instigated systemwide by Frontier. One Montana result was the replacement of the airline's expensive Convair 580 operations in the low passenger generating communities across Montana's Hi-Line and the eastern half of the state. Smaller, twin-engined aircraft operated by Apache Airlines took over from Frontier in these areas of Montana in the spring of 1970. By fall financial losses sustained by Apache necessitated the return of Frontier. Because of continued light passenger boardings in these areas of Montana, Frontier then introduced the 17-passenger DeHavilland Twin Otter when the carrier replaced Apache.

At this time, financial losses totaling over \$22 million were sustained by Frontier between 1968 and 1971. Then in 1972 there was a dramatic financial turnaround begun in Frontier's fortune when a net profit of \$7.1 million was reported by the company. Again in 1973 a net profit of \$7.6 million further enhanced the airline's financial position. This strengthened bottom line result reflected the new management philosophy of commitment and reliable service introduced by Mr. A. L. Feldman. Mr. Feldman reorganized the Frontier team and the company's sense of direction shortly after he was named the new President and Chief Executive in the spring of 1971.

Now in 1974 the airline continues into its third year new records for on-time performance, the highest in the industry; high passenger load factors, the highest for a regional carrier; a first quarter net profit of \$4.1 million, the best quarterly financial showing in the company's 27 years of operations.

And by August of this year Frontier expects to begin a new jet serv-

ice to the isolated area of Kalispell-Whitefish-Columbia Falls served by Glacier International Airport at the head of Montana's Flathead Valley. This will be an extension of Frontier's present jet service at Missoula. recreational area new direct jet service. It would provide this year-round ice with Salt Lake City, Denver and midwest-southwest areas on Frontier's jet system.

Both Montana and Frontier Airlines have been partners in progress these past 27 years.

(Continued from Page 2).

yearly in-flight "saves" of pilots in distress are accomplished by air traffic control specialists at Flight Service Stations.

Thus one cannot help but question as highly irresponsible the portion of FAA's requested appropriations to be used for the transition from the manned to the automated FSS facilities. We urge you to disapprove this portion of the FAA request and to insure pilots continued access to the extremely valuable Flight Service Stations.

Sincerely,

/s/51 United States Senators



CALENDAR

September 1 — Fly-In Breakfast, Yellowstone Airport, West Yellowstone, Montana.

September 1 — 7th Annual Dryland Salmon Barbecue, Robert Wheatcroft Ranch, 18 miles from Jordan Airport.

September 1 — Open House, Butte Aero, Silver Bow County Airport, Butte.

September 13-15 — Montana Pilots Association Fall Fly-In and Mountain Flying Clinic, Helena, Montana.

September 21-24 — National Air Transportation Association, Inc., Mini-Convention, Los Angeles, California.

October 4 — FAA Rocky Mountain Golden Sentinel Flight Safety Team Presentation, C. M. Russell Auditorium, Great Falls.

October 4-6 — Montana Flying Farmers Convention, Heritage Inn, Great Falls.

Letters to the Editor

Montana Division of Aeronautics
P. O. Box 1698
Helena, Montana 59601
Gentlemen:

On behalf of the Gallatin Valley Hangar of the Montana Pilots Association, I want to thank you for the assistance given us during the recent MPA convention at Big Sky. Your newsletter coverage is always welcome and we also appreciate the useage of the portable tie down stakes and ropes.

Sincerely,

/s/Jim

James H. Monger, President
Gallatin Valley Hangar
Montana Pilots Association

THE WHIRLY-GIRLS

Applications are now being accepted for the eighth annual Doris Mullen Whirly - Girls Scholarship, which will be awarded next January to a deserving woman for use toward obtaining an initial or advanced helicopter rating.

The \$1,000 Scholarship is presented each year by the Whirly-Girls, international women helicopter pilots, in memory of Doris Mullen, Whirly-Girl #84, who was fatally injured in an airplane accident on July 24, 1966.

Applicants must hold a current pilot's license, must intend to make use of the helicopter rating in such a way as to further the involvement of women in aviation and must

demonstrate that they require financial assistance to obtain the helicopter ratings.

Scholarship applications are available from The Whirly-Girls, Suite 700, 1725 De Sales Street, N.W., Washington, D.C. 20036. Deadline for their return is November 1, 1974.

The eighth annual Scholarship will be presented at The Whirly-Girls Award Dinner, January 19, 1975, in conjunction with the annual convention of the Helicopter Association of America in Anaheim, California. A special feature of the dinner will be the presentation of the initial donation to the Scholarship Fund from the newly formed Men's Auxiliary of The Whirly-Girls.

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"To foster aviation, as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in **research, development, and advancement of aviation**; to develop uniform laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

P. O. Box 1698

Helena, Montana 59601



AUGUST, 1974

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